

NOTES

HYPTIS MUTABILIS (LABIATAE) IN SOUTHEASTERN UNITED STATES.—In September 1977 I collected, in far southeastern Louisiana, a member of the Labiatae that was not at the site when I was there in summer from 1963 to 1972. After some struggle through a scant and not-too-helpful literature, I finally identified the species as *Hyptis mutabilis* (L. Rich.) Briq., a weedy plant widespread in warm America and new to Louisiana.

This paper is the result of my curiosity concerning *H. mutabilis*. It summarizes literature on the species, provides illustrations of the species (there apparently are no good, easily accessible illustrations in the literature), and gives data on its occurrence in southeastern United States.

By the most recent monographer of *Hyptis* (Epling 1949), *H. mutabilis* was recognized as a single, highly variable species not divisible into infraspecific taxa (Epling 1949) although in older works it was treated as a species with several varieties or even as several species (Epling 1933, 1936). Its representatives in the United States were treated as two species or as two varieties of one species. Such distinctions fail when many specimens are examined.

In Epling's first work on *Hyptis* (Epling 1933), he used "var. *spicata* Briq." for those representatives of *H. mutabilis* in the West Indies and the Caribbean coastal regions. (Presumably var. *spicata* is what today would be called var. *mutabilis*, although this point is not resolvable from Epling's prose; he never was able to locate the holotype of *H. mutabilis*.) In his synopsis of South American Labiatae, Epling (1936) continued to use "var. *spicata* Briq." in the same way. However, he commented: "I have sought to indicate here the principal modes of variation within this puzzling complex [*H. mutabilis*]; however, it is impossible to refer numerous specimens with certainty to any one group [variety], and I hesitate to cite specimens within the divisions [varieties] I have indicated." In Epling's last work on *Hyptis* (Epling 1949), he reduced *spicata* and other varieties recognized in 1933 and 1936 to synonymy under *H. mutabilis*. Abandoning efforts to distinguish infraspecific taxa, he wrote: ". . . parece que no posse razas bien definidas" (he did, however, refer to his 1936 work where "La indiqué . . . las variantes principales"). In all his papers, he recorded *H. mutabilis* only from Florida in southeastern United States.

The author of the epithet *mutabilis* is frequently and incorrectly given as "A. Rich." (e.g., in Epling 1933, 1936; Small 1933). The actual author, Louis Claude Marie Richard (usually cited as "L. Rich." or "L. C. Rich."), published *Nepetha* [sic] *mutabilis* in 1792. Louis eventually turned his attention from *Nepetha* and fathered Achille Richard ("A. Rich."), who was not born until 1794.

Hyptis mutabilis was recorded from southeastern United States as early as 130 years ago. Bentham (1848), under *H. spicata*, included the note "Florida (h. Torrey!)," evidently based on a collection (or possibly two) he had received from the herbarium of John Torrey. Two undated sheets—one at NY, one at GH—appear to be duplicates of the specimen(s) Bentham saw; they bear, among equivocal collection data and in handwriting, the annotation *H. spicata* and the notes "fide Bentham" (NY) and "Benth. in lit." (GH).

Gray (1878) ascribed *H. spicata* to "S. Florida." Chapman (1889) reported it from "Tampa and Jacksonville, Florida"; he gave the same distribution later (Chapman 1897), but the word "introduced" was added without explanation (and possibly without justification). Small (1903) recognized, under the name *Mesosphaerum*, two species in the *mutabilis* complex: *Mesosphaerum spicatum* and *M. mutabile*. The former was ascribed to Florida and Alabama, the latter to Florida. (I cannot verify, through herbarium specimens, the presence of *H. mutabilis* in Alabama that early.) Small later (1933) withdrew the Alabama record: using the name *Hyptis*, he cited *H. mutabilis* only from Florida and said, of *H. spicata*, "not now definitely known from our range."

More recently, a good account of *H. mutabilis* is that by Standley and Williams (1973), who gave a detailed description of the species but did not ascribe it to conterminous United States at all. Long and Lakela (1971) gave the range as "Fla. to Va."

The specimens of *H. mutabilis* I have seen suggest that, in southeastern United States, this species was originally—and for about a century—known only from Florida. From that state it has, in the last 3.5 decades, spread northward and westward, reaching Louisiana very recently.

The earliest specimens of *H. mutabilis* available to me from southeastern United States (herbarium of John Torrey, NY, GH) were, as indicated above, collected in Florida before 1848. All other pre-1900 specimens are from Florida. Indeed, the earliest non-Florida specimen I saw was collected in southeastern Virginia in 1939 by Fernald and Long. That this specimen represents a non-persistent introduction is suggested by the facts that (1) it is the only Virginia collection I saw and (2) the collection locale is separated by 500 miles from the main U.S. range of the species. The northward and westward spread of *H. mutabilis* can be seen in *exsiccata*: the earliest western Florida (i.e., the Panhandle) collection I saw is from 1897 (the species was only rarely collected there until the 1940s and later); the earliest Georgia collection, 1940; Alabama, 1952; Mississippi, 1968; and Louisiana, 1977 (my collection was made just a few hundred feet west of the Louisiana-Mississippi border, which the species had obviously just crossed in its westward push. The documented distribution of *H. mutabilis* in southeastern

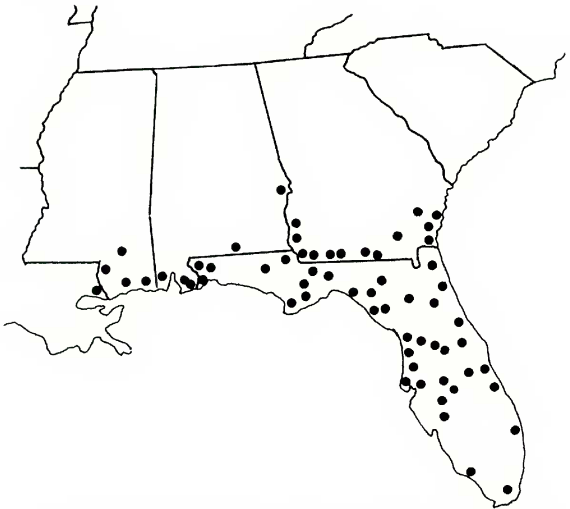


Fig. 1. *Hyptis mutabilis*. Documented distribution in southeastern United States (Virginia locale omitted).

United States is shown in Fig. 1.

Available specimens of U.S. *H. mutabilis* suggest that the species has become much commoner in recent decades. The decade-distribution of specimens seen by me is as follows: pre-1848, 1 collection (possibly 2); 1850s, none; 1860s, none; 1870s, 2; 1880s, 1; 1890s, 9; 1900s, 5; 1910s, 1; 1920s, 1; 1930s, 2; 1940s, 7; 1950s, 16; 1960s, 43; and 1970s, 34 (through 1976 except my 1977 Louisiana specimen).

It is, of course, possible that specimen-based data on spread and abundance of *H. mutabilis* represent vagaries of collection and collectors rather than biological verities. But the data nevertheless strongly support my speculations.

Of the 127 conterminous U.S. collections of *H. mutabilis* I have seen, 93 are from Florida, 21 from Georgia, 6 from Alabama, 5 from Mississippi, 1 from Louisiana, and 1 from Virginia.



Fig. 2. *Hyptis mutabilis*. Flower (left) and fruiting calyx (right) (based on sketches accompanying Curtiss 5112, Jacksonville, Florida, NY). The vertical line represents 0.5 cm.

Hyptis mutabilis occurs mostly in disturbed places (e.g., roadsides, railroad yards, orchards, gardens, lake shores, river banks, fallow fields, ballast ground, thickets, and grazed areas). Some label data, though, suggest that it grows also in less disturbed habitats (e.g., stabilized dunes, hardwood or softwood forests, and hammocks). It is at home in moist or dry soil and in sun or shade. The method of its dissemination is unknown. No label data or literature reports suggest that *H. mutabilis* is a troublesome weed.

My Louisiana collection (St. Tammany Parish: 8 mi SE of Slidell along hwy. 190, 8 Sep 1977, Thieret 50223, KNK) was made from a colony of about 25 plants in a roadside weedy area bordering a channel of the Pearl River. Associates were mostly grasses, including *Paspalum* spp., *Cenchrus incertus*, and *Eragrostis oxylepis*. I especially noted two characteristics of the specimen I collected. First, its corollas, though small, were relatively showy, being bright purple with white blotches; and second, its foliage, crushed, had an aroma so delightful that *H. mutabilis* is certainly one of Louisiana's best-smelling mints, perhaps second only to *Satureja georgiana*.

The best identifying characteristic for *H. mutabilis* is the calyx (Figs. 2, 3). About 1.5–2.0 mm long, and campanulate in flower, it enlarges consider-



Fig. 3. *Hyptis mutabilis*. Section of fruiting inflorescence (Mitchell 350, Jackson Co., Florida, FSU). The vertical line represents 1 cm.

ably and quickly in fruit, becoming as much as 7.5 mm long and tubular. The 10 longitudinal veins increase in prominence, and strong cross veins develop to connect them. The accrescent calyx was first noted by Richard

(1792), the describer of the species, who wrote, "calycibus defloratis elongatus"; the characteristic was probably the basis for the epithet *mutabilis*.

The following description of *H. mutabilis* is based primarily on specimens, secondarily on literature.



Fig. 4. *Hyptis mutabilis*. Section of plant with dense inflorescences (Duncan 17187, Wayne Co., Georgia, GA). The vertical line represents 4 cm.

Plants herbaceous, erect, to 2.2 m high, often much branched, the branches glabrous to villous. Leaves membranaceous, 2.0–18.0 cm long, narrowly to broadly ovate to rhombic (rarely subrotund or even reniform), acute to acuminate at the apex, attenuate, cuneate, truncate, or subcordate at the base,



Fig. 5. *Hyptis mutabilis*. Section of plant with interrupted inflorescences (Shuey 1688, Polk Co., Florida, USA). The vertical line represents 4 cm.

finely to coarsely crenate to serrate, sometimes doubly so, variously pubescent to glabrate, passing abruptly or gradually into bracts; petioles 0.5–8.0 cm long. Flowers sessile to very short pedicelled, in bracteate verticels, these arranged in dense or interrupted (Figs. 4, 5), leafy or naked, terminal, spiciform inflorescences 3.0–20.0 cm long; bracts ovate to elliptic, acute to acuminate, prominently nerved. Calyx tubular to narrowly campanulate and 1.5–2.0 mm long at anthesis, tubular, reticulate-veined, and to 7.5 mm long in fruit, the teeth subulate to setaceous, erect, 0.7–1.2 mm long. Corolla 3.0–5.0 mm long.

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TRILLIUM PUSILLUM (LILIACEAE) IN MISSISSIPPI—*Trillium pusillum* Michx. is apparently one of the rarer species of the eastern United States. Roe (1978) considers the species to consist of four more or less disjunct populations probably of varietal status. His map shows a wide distributional gap between South Carolina and Texas, which has in part been